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The Power of Federal Grants to Support Community-Centered Adoption of Low-Carbon Energy

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Good Energy Collective is a policy research organization building the progressive case for nuclear energy as an essential part of the broader climate change agenda. We develop smart policies at every scale to accelerate the just and equitable deployment of advanced nuclear technologies.

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The United States needs to add a massive amount of new, low-carbon energy across the country. The U.S. Department of Energy houses many innovative initiatives to make this happen. Federal policymakers need to make it simpler for under-resourced communities to benefit from these pivotal energy and environmental investments. Crafting thoughtful and community-centered grant opportunities is one of the best ways to do that.

Through Congress' enactment of new, impactful laws brimming with clean energy funding and the Biden administration's promise to promote environmental and energy justice, the federal government has furnished an opportunity to facilitate a more equitable dispersion of the benefits from new public and private clean energy investments.¹ This stock of resources and commitment can support underserved communities across states, tribal lands, and U.S. territories that face a disproportionate amount of air, water, and land contamination and have historically been left out of opportunities for large, clean infrastructure investment.

Much of this available funding will take the form of grants, such as formula and block grants that follow established calculations for distribution, or competitive grants to which any eligible stakeholder may apply. Federal grants differ from other forms of government assistance, like loans (which require the recipient to repay all or more than the loaned amount) or tax credits (which reduce the amount a recipient owes on their annual tax bill). Those kinds of funding, though important, are less useful to communities.² Grants also differ slightly from cooperative agreements, for which federal agencies are much more involved in the oversight and direction of the funded project and

¹ "Infrastructure Investment and Jobs Act," Public Law 117-58, <https://www.congress.gov/bill/117th-congress/house-bill/3684>; "CHIPS Act of 2022," Public Law 117-167, <https://www.congress.gov/bill/117th-congress/house-bill/4346>; "Inflation Reduction Act of 2022," Public Law 117-169, <https://www.congress.gov/bill/117th-congress/house-bill/5376>.

² Chye-Ching Huang and Roderick Taylor, "Any Federal Infrastructure Package Should Boost Investment in Low-Income Communities," Center on Budget and Policy Priorities, June 28, 2019, <https://www.cbpp.org/research/federal-budget/any-federal-infrastructure-package-should-boost-investment-in-low-income>.

for which recipients sometimes have to put forward an equal or lesser dollar amount as a requirement of the award.³

Congress and the U.S. Department of Energy (DOE) have gradually shifted the agency's attention from supporting energy R&D to shepherding promising energy technologies across their valleys of death and into commercial use. DOE houses much of the government's energy-related grantmaking. For example, the department recently established the Office of State and Community Energy Programs to reduce energy costs and improve energy access across the country.⁴ This office is running nine preexisting and new grant and cooperative agreement programs totaling almost \$6 billion to support communities, tribes, schools, and other stakeholders with weatherization, energy efficiency, and workforce training. The new office is a natural home for future innovative, community-focused grant programs across energy technologies, including nuclear energy.

Another key player is the Office of Clean Energy Demonstrations, which Congress created in the 2021 infrastructure law to manage DOE's public-private demonstration projects of new energy technologies.⁵ The office has heard recommendations on how it can identify interested host communities and foster good community engagement. It has already hired multiple stakeholder engagement specialists to make sure the full breadth of interested parties can participate in these projects.⁶

In August of 2022, Energy Secretary Jennifer Granholm explained how DOE is centering environmental justice, "from how we put out information about new funding opportunities and who we seek information and feedback from, to how we select awardees and how we're gonna hold our grant recipients accountable to communities."⁷

³ State and local officials and organizations can see which energy-related grants are available to them by exploring www.grants.gov and targeting their search with a term like "environmental justice" (see: "Search Grants," accessed August 31, 2022, <https://www.grants.gov/web/grants/search-grants.html?keywords=%22environmental%20justice%22>). DOE also keeps a list of funding opportunities stemming from the bipartisan infrastructure law: U.S. Department of Energy, "Bipartisan Infrastructure Law Programs," <https://www.energy.gov/bil/bipartisan-infrastructure-law-programs>.

⁴ U.S. Department of Energy, "About the Office of State and Community Energy Programs," accessed August 31, 2022, <https://www.energy.gov/scep/office-state-and-community-energy-programs>.

⁵ U.S. Department of Energy, "Office of Clean Energy Demonstrations," accessed August 31, 2022, <https://www.energy.gov/office-clean-energy-demonstrations>.

⁶ Tanya Das et al., "First-of-Its-Kind: Making DOE's New Office of Clean Energy Demonstrations a Success," multiple organizations, <https://www.goodenergycollective.org/policy/first-of-its-kind-making-does-new-office-of-clean-energy-demonstrations-a-success>.

⁷ U.S. Department of Energy, "Justice40 Kickoff," Video, https://www.youtube.com/watch?v=WHJWpxyWx-o&ab_channel=U.S.DepartmentofEnergy.

DOE is actively working to involve underserved places and people in decisions about agency programs and funded projects, calling upon awardees to identify and engage with the full breadth of project stakeholders and requiring applicants to clean energy demonstration and deployment programs to provide a community benefits plan.⁸ That plan is to detail grant-seekers' strategy to engage with communities and labor unions; create good jobs; facilitate diversity, equity, inclusion, and accessibility; and meet the agency's Justice40 goals.⁹ This focus on just and equitable outcomes will benefit under-resourced communities in red and blue places: A forthcoming post from Good Energy Collective will show how these initiatives will benefit both politically conservative and politically liberal areas.

Supporting Communities in Adopting Clean Energy Technologies Through Grants

As long as the funding aligns with their mandates, federal agencies can leverage their budgets to create grants that expand access to low-carbon energy and consider local histories and preferences. Below are some examples of the focus areas these grants can take.

- **Supporting the development of community tools and templates.** Federal agencies and national laboratories can help fund new tools that enable everything from cost-benefit analyses to energy system design planning to site identification. For example, the Advanced Research Projects Agency-Energy (ARPA-E), through its MEITNER program, has contributed toward web tools developed by the University of Michigan's

⁸ U.S. Department of Energy, "General Guidance for Justice40 Implementation," July 25, 2022, <https://www.energy.gov/sites/default/files/2022-07/Final%20DOE%20Justice40%20General%20Guidance%20072522.pdf>, 22-27.

⁹ Ibid., 10. More details are available at U.S. Department of Energy, "DE-FOA-0002745: Bipartisan Infrastructure Law (BIL) Solar and Wind Grid Services and Reliability Demonstration," accessed August 30, 2022, <https://eere-exchange.energy.gov/Default.aspx#Foald06eb81bc-a88e-4560-89fa-d465a29fff62>, 12-16. Project developers can access many existing resources across energy technologies for tools and best practices to plan and conduct successful stakeholder engagement (See: U.S. Department of Energy, *Waste Isolation Pilot Plant: Stakeholder Outreach Plan*, https://wipp.energy.gov/WIPPCommunityRelations/documents/Rev.7_StakeholderPlan.pdf; National Energy Technology Laboratory, *Best Practices: Public Outreach and Education for Geologic Storage Projects*, June 2017, https://www.netl.doe.gov/sites/default/files/2018-10/BPM_PublicOutreach.pdf; ⁹ Abbe Ramanan et al., "Community Outreach and Solar Equity," *Clean Energy States Alliance*, February 2021, <https://www.cesa.org/wp-content/uploads/Community-Outreach-and-Solar-Equity.pdf>.) The Electric Power Research Institute, for example, with funding support from DOE, will soon release an updated siting guide to help developers identify locations for new nuclear plant projects.

Fastest Path to Zero initiative and national laboratory partners to help stakeholders identify potentially suitable communities and countries, respectively, for energy technologies and nuclear reactors specifically.¹⁰ Likewise, the National Reactor Innovation Center at Idaho National Laboratory has supported the development of the [STAND tool](#) between the Fastest Path to Zero initiative and two other national laboratories to support stakeholders in locating potential candidate communities to host advanced reactors.¹¹

- **Replenishing brownfields where energy projects have shuttered or caused contamination.** Communities familiar with hosting energy infrastructure may be among the most interested in new energy projects. While more resources to support local governments or groups in identifying or applying for listed programs are merited, the Interagency Working Group on Coal & Power Plant Communities & Economic Revitalization has taken the first step of releasing a clearinghouse collating many of the grants and other funding opportunities available to energy communities to support local renewal.¹² Elsewhere in the government, the Economic Development Administration at the U.S. Department of Commerce is supporting both coal communities¹³ and nuclear closure communities¹⁴ with grants and cooperative agreements toward establishing new local economic and employment opportunities. In the nuclear context, the Fission for the Future Act in the CHIPS and Science law created a new program at DOE which, if funded, will help states, tribes, municipalities, utilities, labs, universities, and private companies to conduct R&D on or demonstrate advanced reactors, with priority given to work near retired or retiring fossil fuel plants.¹⁵

¹⁰ Olufemi A. Omitaomu et al., "Methods and system for siting advanced nuclear reactors and evaluating energy policy concerns," *Progress in Nuclear Energy* 148, June 2022, https://www.sciencedirect.com/science/article/abs/pii/S0149197022000750?dgcid=rss_sd_all, 6.

¹¹ National Reactor Innovation Center, "Siting Tool for Advanced Nuclear Development (STAND)," <https://nric.inl.gov/stand-tool-2/>.

¹² Interagency Working Group on Coal & Power Plant Communities & Economic Revitalization, "Funding Opportunities," accessed August 31, 2022, <https://energycommunities.gov/funding-opportunities/>.

¹³ U.S. Economic Development Administration, "Coal Communities Commitment," accessed August 30, 2022, <https://eda.gov/arpa/coal-communities/>.

¹⁴ U.S. Economic Development Administration, "EDA Seeks Applications to Support Nuclear Closure Communities," May 11, 2020, <https://eda.gov/news/blogs/2020/05/11/Nuclear-Closure-Communities.htm>.

¹⁵ U.S. House of Representatives, "CHIPS Act of 2022," Sec. 10781, <https://www.congress.gov/bill/117th-congress/house-bill/4346>.

In addition, Good Energy Collective continues to recommend that policymakers require greater coordination between the agencies responsible for legacy uranium mining and milling sites and provide more funding toward remediation, while also making sure the affected communities have access to funding for new, clean energy projects, if they are interested.¹⁶

- **Facilitating feasibility studies and technical assistance in communities interested in new clean energy technologies.** Providing support for communities to conduct project planning or assessments can ensure the government does not straddle communities with the side costs of new energy construction.¹⁷ The Office of Clean Energy Demonstrations and national laboratories can play an important role in this area.
- **Supporting communities in conducting their own assessments.** Policymakers should work to identify ways that municipalities affected by federally supported energy projects can engage more with the environmental analysis process, such as by increasingly involving communities in National Environmental Policy Act assessments. When the government was still actively considering siting a permanent nuclear waste repository at Yucca Mountain, Congress explicitly required DOE to provide grants to Nevada and impacted local governments to participate and conduct their own environmental oversight.¹⁸

Agencies could also encourage private project developers to involve local residents in environmental review work. For example, the private company in Finland in charge of the country's nuclear waste allowed communities to lead the environmental assessment process for a repository, giving them greater ownership over establishing the proposed project's environmental record.¹⁹

¹⁶ Suzanne Baker et al., "A Policy Pathway for Nuclear Justice," Good Energy Collective, April 27, 2021, <https://www.goodenergycollective.org/policy/a-policy-pathway-for-nuclear-justice>.

¹⁷ "Letter to U.S. Energy Secretary Jennifer Granholm," *Information Technology & Innovation Foundation*, February 14, 2022, <https://www2.itif.org/2022-DOE-OCED-letter-recommendations.pdf>, 7-8.

¹⁸ 42 U.S. Code § 10136 - Participation of States, <https://www.law.cornell.edu/uscode/text/42/10136>. See also: "Nye County Agenda Information Form," April 5, 2005,

<https://www.nyecountynv.gov/DocumentCenter/View/4389/Item-27a?bidId=>; "State of Nevada v. U.S. Department of Energy," 133 F.3d 1201 (9th Cir. 1998), <https://casetext.com/case/state-of-nevada-v-us-department-of-energy>.

¹⁹ Jessica Lovering, Suzanne Baker, and Todd Allen, "Social License in the Deployment of Advanced Nuclear Technology," *Energies* 14, 4304, July 16, 2021,

https://www.researchgate.net/publication/353336426_Social_License_in_the_Deployment_of_Advanced_Nuclear_Technology, 6.

- **Fostering education and community engagement around hosting new energy projects.** Federal grants can help inform communities about clean energy technologies and other federal programs with resources available to build them. As one example, funding for energy communities and education around nuclear energy will be critically important over the next few years as the first few U.S. advanced reactor designs move through the licensing process and the demonstration projects in Wyoming and Washington state move forward. DOE’s Office of Nuclear Energy in April 2022 announced a first-of-a-kind funding opportunity for partner organizations to conduct activities like engaging with communities on opportunities in nuclear energy.²⁰ Where it makes sense, Congress should consider codifying this kind of effort at DOE to replicate community engagement programs across fiscal years and administrations.
- **Funding nontechnical research into the perceptions and lived impacts of clean energy technologies.** Technological research into clean energy serves a crucial role in improving public health and opportunity, but so does sociotechnical research into how those resources impact people and how local histories affect communities’ energy preferences. For the first time in Fiscal Year 2022, the Office of Nuclear Energy, which has long prioritized hard-science research over social scientific study, funded three discrete studies with an environmental justice or equity focus through the Nuclear Energy University Program under cooperative agreements.²¹ Meanwhile, the CHIPS and Science law explicitly encourages NE to support scholarships and

²⁰ U.S. Department of Energy, “U.S. Department of Energy Seeks Nuclear Energy Partners to Connect with Communities,” April 21, 2022, <https://www.energy.gov/ne/articles/us-department-energy-seeks-nuclear-energy-partners-connect-communities>; U.S. Department of Energy, Office of Nuclear Energy, “Financial Assistance Funding Opportunity Announcement: Cooperative Agreement to Facilitate Coordination Between DOE-NE and Energy Communities, Vital Constituencies, and Educational Groups,” DE-FOA-0002719, https://www.energy.gov/sites/default/files/2022-04/FOA%20FINAL%204.21.2022_0.pdf, 20.

²¹ U.S. Department of Energy, “Abstract: Engaging Wyoming Communities in an Environmental Justice Approach for Advanced Nuclear Energy Facility Siting,” accessed August 30, 2022, https://neup.inl.gov/FY22%20Abstracts/CFA-22-27138_TechnicalAbstract_2022CFATechnicalAbstractCFA-22-27138.pdf; U.S. Department of Energy, “Abstract: Environmental Justice and Equity Framework for Siting Nuclear Energy in America’s Arctic,” accessed August 30, 2022, https://neup.inl.gov/FY22%20Abstracts/CFA-22-26695_TechnicalAbstract_2022CFATechnicalAbstract22-26695.pdf; U.S. Department of Energy, “Abstract: Integrating socially led co-design into consent-based siting of interim storage facilities,” accessed August 30, 2022, https://neup.inl.gov/FY22%20Abstracts/IRP-22-28171_TechnicalAbstract_2022CFASummaryAbstractIRP-22-28171.pdf.

fellowships for students focused on nontechnical nuclear research that increases community participation and confidence in nuclear energy.²²

Best Practices for Grant Programs

Improving equitable energy outcomes through grants is only possible by ensuring grant programs reflect local interests, identify trusted messengers, and support new or under-resourced grant-seekers to apply. Some best practices for developing and executing grants are provided below.

- **Take input from stakeholders around the country to inform program development.** Dr. Tony Reames, Deputy Director of DOE's Office of Economic Impact and Diversity, has [emphasized](#) the need for greater flexibility and collaboration under Justice40 between DOE and awardees. Agencies should encourage early and meaningful communication between themselves and interested communities or community-based organizations and shape grant programs based on feedback they receive about local needs, interests, and project parameters.²³ Local groups and tribal nations know their regions' needs the best; grant program managers should seek and incorporate their expertise.²⁴
- **Create educational resources for grant-seekers to learn about clean energy funding opportunities.** The best-resourced cities, municipalities, and businesses have a leg up on other communities that face budgetary and staffing constraints against investigating ways to access federal funds. DOE has indicated its intention to ensure it is promoting easy access and information-sharing about funding opportunities, as well as encouraging under-resourced communities to apply.²⁵
- **Support communities and organizations in navigating grant applications.** Not all applicants will be familiar with the application process or have the resources,

²² Sec. 10745, U.S. House of Representatives, "H.R.4346."

²³ Abbe Ramanan et al., "Community Outreach," 18.

²⁴ *Ibid.*, 7.

²⁵ "Letter to U.S. Energy Secretary Jennifer Granholm," 7.

personnel, or experience to apply. Federal agencies and national laboratories should provide technical assistance to small communities and community-based organizations that need help learning about available resources, filling out their grant applications, and understanding the sources of program constraints.²⁶ Likewise, all funding documents should be easy to read and interpret.

- **Look to community engagement experts to inform and perform local engagement.** In projects with significant federal involvement, federal officials won't always be the most trusted or experienced partners locally. Policymakers should look toward people with experience working, living, or interacting with marginalized communities not only to shape grant programs, but to lead stakeholder outreach and relationship-building.²⁷ Policymakers can explore leveraging grants or calling on awarded project developers to support on-the-ground, community-based organizations or trusted local leaders to conduct all or some engagement work. Grant programs could also support the development of templates for stakeholder engagement and technical considerations that project developers can follow, with the recognition that not all templated practices will be replicable across technologies or geographies.
- **Encourage regular communication.** Like in other contexts, knowing and having connections with the right people to contact is often a necessity for accessing assistance. Some federal funding opportunities are tailored to applicants that have preexisting relationships with program officers, an exclusionary practice that risks shutting out potential new awardees. Federal grant managers should not only reach out to prospective awardees about available opportunities, but encourage them to maintain repeated contact with the program and to share their observations about the state of the community or industry.

²⁶ Barbara A. Israel et al., "Community-based Participatory Research: Policy Recommendations for Promoting a Partnership Approach in Health Research," *Education for Health* 14 (2), 2001, <https://thrivingearthexchange.org/wp-content/uploads/2017/07/EducforHealthIsrael.pdf>, 189; Abbe Ramanan et al., "Community Outreach," 18.

²⁷ Abbe Ramanan et al., "Community Outreach," 7.

Likewise, grant-seekers should proactively establish relationships with grant program officers and review resources and best practices for grant proposal submissions.²⁸ They may also wish to reach out to their congressional representative for additional support.²⁹

Conclusion

Achieving environmental and energy justice while building out climate-friendly energy requires more resources for communities to learn about federal energy programs, access funds, and become equal project partners. Well-constructed grant programs can play a key role in facilitating the successful and equitable adoption of clean energy.

²⁸ Congressional Research Service, “Resources for Grantseekers,” RL34012, June 29, 2021, <https://crsreports.congress.gov/product/pdf/RL/RL34012>; Congressional Research Service, “How to Develop and Write a Grant Proposal,” August 28, 2019, RL32159, <https://crsreports.congress.gov/product/pdf/RL/RL32159/23>.

²⁹ Congressional Research Service, “Grants Work in a Congressional Office,” July 1, 2021, RL34035, <https://sgp.fas.org/crs/misc/RL34035.pdf>, 7.